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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,134

03/16/2004

Sadayuki Shoudai

890050.470

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11/22/2006

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EXAMINER

RICKMAN, HOLLY C

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,134

Applicant(s)

SHOUDAI ET AL.

Examiner

Holly Rickman

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) 3-13 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 14, 16 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The rejection of claims 1-2 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 11-296839 is withdrawn in view of Applicant's amendments and arguments.

4. Claims 14 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 11-296839 (English machine translation included).

JP 11-296839 discloses a magnetic recording tape having a supporting body, a back coat layer on a lower surface of the supporting body, and a magnetic recording layer on the upper surface of the supporting body. The reference teaches that a protruding portion is formed on the

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cutting edge surfaces of the magnetic tape wherein the protrusion forms a local maximum (see Figure 1; paragraphs [0004], [0008]-[0011]). The reference indicated that the local maxima are located between 0.05-0.6 microns from the center point of the supporting body. As shown in Figure 1, the maxima may be within 0.05 microns of the center point of the supporting body. The thickness of the supporting body is between 2 and 4.7 microns. The center point is half of the total thickness or 1-2.35 microns. Thus, the value corresponding to the claimed values of BL or BU are calculated as follows: minimum value = $1 + 0.05 = 1.05$ microns and maximum value = $2.35 + 0.6 = 2.95$ microns. Therefore, BU or BL = 1.05-2.95 microns.

The total thickness T of the tape is 2-4.7 microns. Given this range, the value of 100BU/T or 100BL/T can be calculated as follows:

$$100 * 1.05 / 2 \text{ to } 100 * 1.05 / 4.7 = 52.5 \text{ to } 22.3$$

$$100 * 2.95 / 4.7 = 62.8 \text{ (could not use lower total thickness value of 2)}$$

Thus, it is the examiner's contention that the reference suggests a range of approximately 22.3-62.8 for the claimed 100BL/T 100BU/T values. The endpoint of 62.8 anticipates the claimed range.

In the alternative, it would have been obvious to one of ordinary skill in the art at the time of invention to choose an optimal value from within the disclosed range of 0.05-0.6 microns for the location of the maximum peak point (thereby optimizing the claimed BL or BU value) in combination with the disclosed total thickness values thereby meeting the claim limitations directed to 100BL/T or 1000BU/T. It would have been obvious to adjust the location of the peak point (corresponding to BL or BU) because the reference teaches that this variable is a result effective parameter that eliminates shaving waste and improves tape performance. It has been

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held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

The above described tape inherently has a width and thus meets the limitation of claim 16 requiring “a predetermined width.”

Allowable Subject Matter

5. Claim 1 is allowable over the closest prior art to JP 11-296839. JP 11-296839 fails to teach or suggest the claimed tape having the specified ratio of BU/T:BL/T as now required by claim 1. The prior art fails to teach or suggest a motivation to optimize this particular ratio.

6. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable for the reasons set forth in paragraph 5, above, if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 9/18/06 have been fully considered but they are not persuasive. Applicant argues that Akira (JP 11-296839) fails to indicate where the local maximum is located in a cut surface of the supporting body. Applicant asserts that what Akira described in paragraph [0012] “represents a distance from datum line 18 perpendicularly drawn from the top-most vertices 17 of the curved portion of the supporting body to the slit end surface 15 of the back coat layer 14.” The Examiner maintains that this measurement corresponds to the claimed local maximum position. It is not clear to the Examiner from Applicant's arguments

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why this particular measurement does not meet the limitations of the claims. In any case, Applicant's acknowledge that "the local maximum [taught by Akira] *may* fall into the 40% -70% range recited in original claim 1."

Applicant further argues that the prior art to Akira does not disclose a first cut surface and a second cut surface. However, the examiner notes that claims 14 and 16, now rejected in view of Akira, do not require first and second cut surfaces. The claims require "a first position where a first irregular raised and depressed pattern of a first cut surface of the support on the side of the upper blade becomes locally maximal or a second position where a second irregular raised and depressed pattern of a second cut surface of the support on the side of the lower blade" (emphasis added). The examiner has interpreted this recitation to mean that there may be either a first position or a second position corresponding to first and second cut surfaces. The claim does not require both.

Applicant's third point in that the prior art does not disclose ratio between cut surfaces. The examiner agrees with this argument and has therefore, indicated allowability of the claims including this particular feature (i.e. claims 1 and 15).

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Holly Rickman', with a stylized flourish at the end.

Holly Rickman
Primary Examiner
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